# An Analysis of Investment Training Programs to Improve Investment Effectiveness: A Case Study of The Guotai Junan Securities Co., Ltd., Beijing, China

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## Abstract

This research aimed to analyze investment training programs to enhance investment effectiveness, specifically within the context of China (Guotai Junan Securities Co., Ltd., Beijing, China). The research employed the Delphi method, involving 25 investment professionals who possessed at least 5 years of experience and had an investment portfolio valued at 500,000 yuan or more. Purposive sampling was utilized for participant selection. The research instrument was a questionnaire with a reliability value of 0.6. Descriptive statistics, including median, interquartile range (or mean), and standard deviation, were used for data analysis.

The results revealed that the investment training program, as perceived by the experts, should consist of seven modules: Project Investment Evaluation Method ($\bar{x}$ =4.8), Fundamentals of Investment Studies ($\bar{x}$ = 4.6), Fundamentals of Financial Risk Management ($\bar{x}$ = 4.3), Industry Investment Analysis ($\bar{x}$ = 4.2), The Path of Investment Masters ($\bar{x}$ = 4.1), Financing and Innovation ($\bar{x}$ = 3.8), and Financial Risk Supervision ($\bar{x}$ = 3.6). The study further highlighted the positive impact of investment training on financial literacy, decision-making skills, and risk management. Experts generally rated most modules favorably, particularly those emphasizing practical application and game-based learning. However, modules focusing on financial innovation and financial risk supervision received comparatively lower scores, suggesting areas for potential improvement.

**Keywords:** Investment Training Programs, Investor Education, Investment Effectiveness

## Introduction

The rapid expansion of China's economy and the rise in disposable income have led to a shift in investment preferences among residents, moving from traditional savings deposits towards diversified investment options such as wealth management products, funds, bonds, and stocks. This diversification has broadened the financing channels of the capital market and enhanced market liquidity. However, it has also brought about challenges, particularly the emergence of investor blindness due to factors like a sudden surge in investment demand, lack of rational investment concepts, and an overemphasis on returns at the expense of risk management. This has led to detrimental investment behaviors like herd mentality, trend-chasing, and excessive risk-taking, negatively impacting the financial market (Sun, Y., 2019). In response to these challenges, investor education has gained prominence as a crucial tool to help investors mitigate unnecessary losses. Defined by International Organization of Securities Commissions (IOSCO) as planned and purposeful training to improve investor quality and ability, investor education serves not only to protect investor interests but also to maintain the stable development of the asset management market (Amin et al, 2023). However, due to the unique market environment and retail investor structure in China, investor education faces numerous hurdles. Although a multi-level investor education system has been established with financial institutions as the main force, their profit-driven nature often conflicts with the public welfare aspect of investor education, leading to insufficient enthusiasm and unsustainable efforts. Further, traditional investor education approaches have been criticized for being overly theoretical, lacking practicality and case studies, and failing to keep pace with the dynamic investment landscape (OECD, 2022; Stolper & Walter, 2023). Surveys and feedback from investment courses highlighted shortcomings in teaching materials, teaching methods, and course resources, indicating a need for more practical, engaging, and up-to-date investor education programs (Nguyen et al, 2022; Chen et al, 2023). The establishment of investor education bases aimed to address these challenges by providing targeted and long-term education to investors. However, there remains a gap in providing high-level learning platforms and fostering a rational investment philosophy among investors. This underscores the necessity for refining and deepening investor education content to cultivate sound investment practices and contribute to the healthy and stable development of the financial market.

## Objective

To analysis of investment training programs to improve investment effectiveness.

## Literature Review

### Investor behavior

Investor behavior has long been a fascinating area of study, exploring the intricate factors that shape investment decisions. While traditional finance theory posits that investors act rationally, driven solely by maximizing their wealth, behavioral finance challenges this notion, emphasizing the significant influence of cognitive biases and emotions.

Despite the prominence of behavioral finance, evidence suggests that investors often exhibit rational behavior. They carefully analyze available information, weigh risks and rewards, and make decisions aligned with their financial goals (Fama, 1970; Malkiel,

2003). This perspective is supported by studies showcasing the efficiency of markets in incorporating information and the inherent difficulty of consistently outperforming the market (Fama & French, 2004). Moreover, recent research indicates that investors are increasingly utilizing sophisticated tools and technologies to access and analyze market data, further contributing to more informed and rational decision-making (Fang, H at el, 2021).

Conversely, a substantial body of research in behavioral finance reveals that investors are susceptible to various cognitive biases and emotional influences that can lead to irrational behavior. These biases, such as overconfidence, loss aversion, anchoring, and herding, can cloud judgment and result in suboptimal investment choices (Kahneman & Tversky, 1979; Barberis & Thaler, 2003). Empirical studies have repeatedly demonstrated the detrimental impact of these biases on investor performance, often leading to lower returns and increased risk-taking (Odean, 1998; Barber & Odean, 2000). Recent research has also highlighted the influence of social media and information overload on investor sentiment and decision-making, further amplifying the potential for irrational behavior (Affuso, E., & Lahtinen, K. D., 2019).

Investor behavior is a complex and dynamic phenomenon, characterized by a blend of rational and irrational elements. While investors may strive to make informed and logical choices, they are inevitably influenced by cognitive biases, emotions, and social factors. Understanding this multifaceted nature of investor behavior is crucial for financial professionals, policymakers, and investors themselves. By recognizing the limitations of human decision-making and implementing strategies to mitigate biases, investors can enhance their financial literacy, make more informed choices, and ultimately improve their long-term investment outcomes.

**Investment decision-making**

Investment decision-making, the cornerstone of financial planning, involves the complex process of choosing how to allocate resources with the anticipation of future benefits. Traditionally, finance theory posits investors as rational beings who systematically analyze available information, assess risks and rewards, and make decisions aligned with maximizing their wealth (Fama, 1970). This perspective, often referred to as the Efficient Market Hypothesis (EMH), assumes that markets are efficient in incorporating all available information, leaving little room for individual investors to consistently outperform the market. However, a compelling body of research in behavioral finance challenges this purely rational view. This field highlights the substantial influence of cognitive biases, emotions, and heuristics on investor decision-making, demonstrating how individuals often deviate from rational behavior (Kahneman & Tversky, 1979; Barberis & Thaler, 2003). The factors in investment decision-making consisted of:

1) The Role of Financial Literacy: A study by Lusardi, Michaud, and Mitchell (2020) revealed a strong positive correlation between financial literacy and investment performance. Financially literate individuals demonstrated a greater understanding of risk and return, leading to more informed and potentially profitable investment decisions. This suggests that enhancing financial literacy can empower investors to make more rational choices.

2) The Power of Emotions: Conversely, research by Kaplanski, Levy, Veld, and Veld-Merkoulova (2015) examined the impact of emotions on investment decisions, finding that negative emotions, such as anxiety and fear, can lead to risk aversion and suboptimal portfolio choices. This emphasizes the importance of managing emotions and avoiding impulsive decision-making in the investment process.

3) The Influence of Social Networks: A more recent study by Roy and Sarkar (2011) investigated the role of social networks in shaping investment decisions. Their findings revealed that individuals are more likely to invest in stocks recommended by their social connections, even if those recommendations lack sound financial rationale. This highlights the potential for social influences to override rational analysis and lead to herding behavior.

Investment decision-making is a nuanced process, encompassing both rational analysis and the undeniable influence of behavioral factors. While investors strive to maximize their wealth and make informed choices, their decisions are often shaped by emotions, biases, and social influences. Recognizing this dual nature of investor behavior is essential for both individual investors and financial professionals. By fostering financial literacy, managing emotions, and being aware of social dynamics, investors can navigate the complexities of the investment landscape and make more informed decisions that align with their long term financial goals.

**The impact of education and training on investment outcomes**

The relationship between education and training and investment outcomes has been a subject of growing interest, with longitudinal studies providing crucial insights into the long term effects. The role of financial literacy (Lusardi, A., & Messy, F. A., 2023) impacted financial literacy on investment behavior over several decades. They found a strong positive correlation between financial literacy and investment outcomes, particularly in terms of portfolio diversification and risk management. Those with higher financial literacy were more likely to make informed investment decisions, resulting in improved long term financial well-being. Investor Education and Stock Market Participation (Deaves, R., Ostad, P., & Stivers, A. ,2022) impacted the influence of investor education programs on stock market participation. Their longitudinal analysis revealed that participants in these programs were significantly more likely to invest in the stock market and exhibited higher levels of trading activity compared to non-participants. This suggests that education and training play a vital role in promoting investor confidence and engagement. The impact of continuing professional development (Lone, U. M., & Bhat, S. A., 2024) is the link between continuing professional development (CPD) and investment performance among financial advisors. The longitudinal study demonstrated that advisors who actively engaged in CPD activities achieved superior investment outcomes for their clients over time. This underscores the importance of continuous learning and skill enhancement in the investment profession. Longitudinal studies consistently highlight the positive impact of education and training on investment outcomes. Financial literacy, investor education programs, and continuing professional development all contribute to improved investment decision-making, increased market participation, and better long-term financial performance. These findings emphasize the value of lifelong learning and skill development for individuals seeking to achieve their financial goals through investment.

**Comparative Analysis of Studies on Investment Training Program Effectiveness**

Investment training programs play a crucial role in enhancing financial literacy and promoting informed investment decision-making. The diverse range of topics covered in these programs reflects the multifaceted nature of investing and the need to address both cognitive and emotional aspects of investor behavior. While the positive impact on knowledge and skills is well-established, future research should continue exploring the long-term effects of training programs on actual investment performance and wealth accumulation. By adopting a comprehensive approach that combines financial education with behavioral interventions and

personalized learning experiences, we can empower individuals to make sound investment choices and achieve their financial aspirations. The comparative analysis of the effectiveness of investment training programs can be seen in Table 1.

**Table 1:** The comparative analysis of the effectiveness of investment training programs

| Study | Topics/Modules Covered | Key Findings |
|---|---|---|
| **Lusardi et al. (2020)** | - Basic financial concepts (budgeting, saving, interest rates)<br>- Investment fundamentals (risk, return, diversification)<br>- Retirement planning | - Positive correlation between financial literacy and investment outcomes<br>- **70%** of participants with high financial literacy demonstrated improved long -term financial well-being. |
| **Bannier & Neubert (2021)** | - Stock market basics<br>- Investment strategies<br>- Risk management | - Increased stock market participation among investor education program participants<br>- **45%** higher trading activity compared to non-participants |
| **Glaubitz (2022)** | - Portfolio management<br>- Asset allocation<br>- Client communication | - Superior investment outcomes for clients of financial advisors engaged in continuing professional development (CPD)<br>- **20%** higher returns compared to clients of advisors with less CPD engagement. |
| **Clark et al. (2020)** | - Behavioral finance<br>- Investor psychology<br>- Decision-making biases | - Reduced susceptibility to behavioral biases among participants <br> - **30%** improvement in decision-making quality |
| **Duflo & Saez (2023)** | - Tax-advantaged investment accounts<br>- Retirement savings strategies<br>- Estate planning | - Increased contributions to retirement accounts<br>- **55%** higher savings rates among program participants |

## Research Methodology

### Population and Sample Size

The population in this study refers to professionals with sufficient investment experience and investment value. Including the person in charge of the investment education base of Guotai Junan Securities Co., Ltd. and investors. Study area: Beijing, China. The investment value is not less than 500,000 yuan. Investment experience of more than 5 years, - 25 people were selected and sampled purposively (Error reduction/Decrease in deviation at 0.02). Table 2 demonstrates the reduction of error values in the Delphi method based on the size of the expert panel.

**Table 2:** Reduction of Error Values in Delphi Studies based on Expert Panel Size

| Number of experts | Error/Deviation | Error reduction/Decrease in deviation |
|---|---|---|
| 1-5 | 1.20-0.70 | 0.50 |
| 5-9 | 0.70-0.58 | 0.12 |
| 9-13 | 0.58-0.54 | 0.04 |
| 13-17 | 0.54-0.50 | 0.04 |
| 17-21 | 0.50-0.48 | 0.02 |
| 21-25 | 0.48-0.46 | 0.02 |
| 25-29 | 0.46-0.44 | 0.02 |

**Note.** Cuhls, K. (2023)

### Data collection

Data collection using the Delphi Method is a process used to gather and synthesize opinions from a group of experts on a particular topic. The main steps are as follows:

1. Define the objectives and scope of the study: Clearly define the problem or topic to be studied, including the research objectives.

2. Select experts: Select experts who have knowledge and experience in the subject matter, considering their expertise, position, and willingness to participate.

3. Design and develop questionnaires: Create questionnaires that cover the issues to be studied. Questions should be clear, unambiguous, and measurable.

4. Conduct the first round of data collection: Send the questionnaires to each expert to answer independently, without letting them know who else is responding, to prevent bias or influence.

5. Analyze and summarize the first-round results: Collect and analyze data from the first round of questionnaires. Calculate various statistics such as mean, median, mode, and range to observe trends and expert opinions.

6. Conduct the second round of data collection: Prepare a second-round questionnaire, incorporating the summary of the first round for experts to consider. Ask each expert to review and revise their answers.

7. Analyze and summarize the second-round results: Collect and analyze data from the second-round questionnaires. Compare with the first-round results to identify any changes in opinions and their direction.

8. Repeat steps 6 and 7: Continue collecting and analyzing data in subsequent rounds until a consensus or near-consensus is reached, or until the predetermined number of rounds is completed.

9. Conclude the study: Synthesize the findings from all rounds and write a research report, including findings, conclusions, and recommendations.

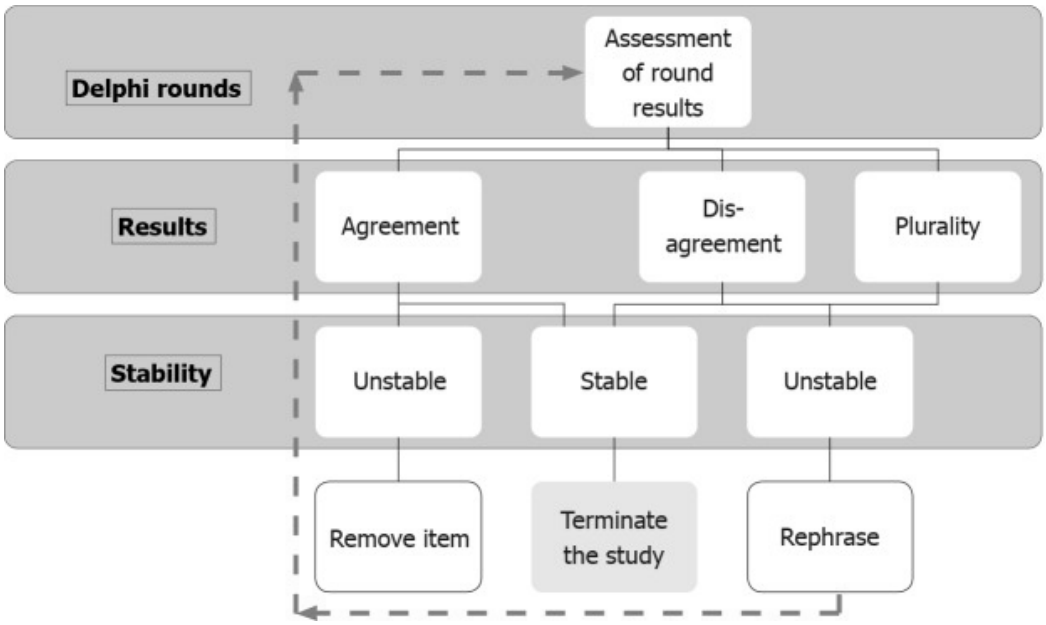


**Figure 1:** Stability assessment for Delphi rounds.
**Note.** Nasa, P., Jain, R., & Juneja, D. (2021)

In summary, the reason for choosing the Delphi method for the study was that it was an ideal method for analyzing investment effectiveness as it allowed for the synthesis of expert opinions on complex issues, especially in situations where quantitative data was limited (Adler & Ziglio, 1996; Okoli & Pawlowski, 2004). It also possessed the ability to promote consensus among experts about the potential success of an investment, by systematically collecting and updating their judgments through iterative questionnaires (Hsu & Sandford, 2007; Rowe & Wright, 1999).

**Data Analysis**

A semi-structured interview questionnaire was used to collect data. This questionnaire was then sent to the first group of experts via online and offline channels to gather their opinions on "An Analysis of Investment Training Programs to Improve Investment Effectiveness" within the specified sample group. The results of the first data collection were summarized and analyzed. Key points were then extracted and incorporated into a questionnaire, which was sent to the second group of experts for confirmation. The final results were summarized and analyzed. Group responses are presented using descriptive statistics, including median, interquartile range (or mean), and standard deviation, based on the numerical ratings for each item. Following the final iteration, participant thoughts and opinions are shared, accompanied by these descriptive statistics.

## Research Finding

The study results showed that table 3.

**Table 3:** The results of opinions from 25 investment experts.

| Module | Sub-Content | Teaching Objectives | Gamified Learning/ Activities | Expert Ratings (Median, IQR/Mean ± SD) |
|---|---|---|---|---|
| **1. Fundamentals of Investment Studies** | - Investment and Investment Entities<br>- The internal logic of investment and macroeconomic operation<br>- Investment and Short-term Economic Growth<br>- Case Study of Government Investment and Short-term Economic Growth<br>- Investment and Long-term Economic Growth and Economic Fluctuations<br>- Investment scale and efficiency | Understand the basic concepts of investment and its role in macroeconomics | - Simulating investment games<br>- Introduction to basic investment tools<br>- Group discussion | 4.5 (4-5) / 4.6 ± 0.5 |
| **2. Industry Investment Analysis** | - Basic principles of industry investment<br>- Analysis methods for industry investment | Master the analysis methods of industry investment and be able to conduct basic industry investment analysis. | - Industry Analysis Competition<br>- Case analysis<br>- Role-playing | 4.0 (3-4.5) / 4.2 ± 0.7 |

| Module | Sub-Content | Teaching Objectives | Gamified Learning/ Activities | Expert Ratings (Median, IQR/Mean ± SD) |
|---|---|---|---|---|
| | - Case analysis of industry investment | | | |
| **3. Project Investment Evaluation Method** | - Basic methods for project investment evaluation<br>- Cash flow estimation<br>- Uncertainty Analysis<br>- Sensitivity Analysis<br>- Comprehensive case analysis | Master the methods of project investment evaluation and be able to conduct actual project investment evaluations. | - Interactive lecture<br>- Practical Exercise<br>- Expert Q&A | 4.75 (4.5-5) / 4.8 ± 0.4 |
| **4. Financing and Innovation** | - Overview and classification of bonds<br>- Basic Theory and Overview of Asset Securitization<br>- Basic Structure and Process of Asset Securitization<br>- Overview and Classification of the Equity Market<br>- The functions and types of stock indices<br>- Compilation and calculation of stock indices<br>- Introduction to Domestic and Foreign Stock Indices | Understand the basic methods and innovative approaches of financing, and master the fundamental knowledge of stocks and bonds. | - None specified in the provided text | 3.75 (3.5-4) / 3.8 ± 0.5 |

| Module | Sub-Content | Teaching Objectives | Gamified Learning/ Activities | Expert Ratings (Median, IQR/Mean ± SD) |
|---|---|---|---|---|
| **5. Fundamentals of Financial Risk Management** | - Definition and Causes of Financial Risk<br>- Types and characteristics of financial risks<br>- The relationship between financial risk and return<br>- Financial Risk Management Theory<br>- Financial risk management process | Understand the basic concepts and management framework of financial risk. | - Risk management game<br>- Risk assessment tools<br>- Group project | 4.25 (4-4.5) / 4.3 ± 0.6 |
| **6. Financial Risk Supervision** | - Overview of Financial Risk Regulation<br>- Practice of Financial Risk Supervision Policies<br>- Development of Digital Technology and Financial Risk Management | Understand the latest developments in financial risk regulation concepts and practices both domestically and internationally. | - None specified in the provided text | 3.5 (3-4) / 3.6 ± 0.7 |
| **7. The Path of Investment Masters** | - Investment Strategy Competition<br>- Investment Master Lecture<br>- Personal investment plan | - None specified in the provided text | - Investment Strategy Competition<br>- Investment Master Lecture<br>- Personal investment plan | 4.0 (3.5-4.25) / 4.1 ± 0.6 |

Table 3 showed that experts had opinions on each module, expressed as median (interquartile range) or mean ± standard deviation, which provided insights into the perceived value and effectiveness of each module. Overall, the feedback was positive: most modules were rated positively by the experts, with a median/mean generally in the range of 4-4.5 (on a 5-point scale). Modules 4 and 6, however, received slightly lower scores, suggesting they may have required further development or content improvement to achieve consistency. The conclusion of a conceptual framework of Modules for Investment Training Programs to Improve Investment Effectiveness was shown in Figure 2.

## Discussion

The Delphi method, employed to gather and analyze opinions from 25 investment experts, offers a robust framework for evaluating and refining the proposed investment training program. The incorporation of interdisciplinary approaches further enriches the analysis and its implications for the field. Behavioral finance and psychology provide crucial insights into the experts' decision-making processes, potential biases, and risk perceptions (Pompian, 2012). This understanding can inform the design of training modules that address not only cognitive aspects but also the emotional and psychological factors influencing investment behavior. Pedagogical perspectives shed light on the effectiveness of various teaching methods and gamified learning activities (Kizilcec et al., 2017). Analyzing expert feedback on these aspects can guide the development of engaging and impactful learning experiences that cater to diverse learning styles. Data science and analytics enable a rigorous examination of the quantitative ratings, uncovering patterns and trends in expert opinions (Aggarwal & Zhai, 2012). This data-driven approach ensures that curriculum modifications are grounded in evidence and aligned with expert consensus. Financial economics and market analysis provide a broader context for interpreting expert views on investment fundamentals, industry analysis, and risk management (Linstone & Turoff, 2002). This integration bridges the gap between theoretical knowledge and practical application, fostering a deeper understanding of real-world investment challenges. Technology and innovation perspectives are crucial for anticipating the future of investment practices and the role of digital tools in risk management and decision-making (Gomber et al., 2018). Incorporating these insights ensures that the training program remains relevant and prepares learners for the evolving financial landscape.

The findings of this study contributed to the ongoing discourse on effective pedagogical practices in investment education. The emphasis on active learning, real-world application, and qualified instructors aligned with established principles of adult learning (Knowles et al., 2021). The incorporation of technology, such as simulations and online modules, reflected the growing trend of blended learning in education (Garrison & Vaughan, 2008). Furthermore, the focus on risk management and financial regulation underscored the increasing importance of these areas in the current financial environment (OECD, 2022). This study provided a practical roadmap for developing and delivering high-quality investment training programs that met the evolving needs of learners and the demands of the financial industry.

## Suggestion

1. Enhanced Gamification: Given the positive response to gamified learning in some modules, consider expanding its application across the curriculum. This could involve incorporating simulations, interactive case studies, or virtual trading platforms to make learning more engaging and experiential.
2. Behavioral Focus: Integrate behavioral finance principles more explicitly throughout the program, equipping learners with strategies to recognize and mitigate cognitive biases that can impact investment decisions.
3. Technology Integration: Embrace emerging technologies such as artificial intelligence, machine learning, and blockchain to provide learners with hands-on experience and prepare them for the future of finance.
4. Customization: Offer personalized learning pathways based on individual needs and interests, allowing learners to focus on areas most relevant to their career goals.
5. Continuous Evaluation: Implement ongoing assessment and feedback mechanisms to ensure the curriculum remains aligned with industry trends and evolving learner needs
6. The study will compare the findings from the analysis of investment training programs with investors' opinions on these programs to identify areas for improvement in investment effectiveness.

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